

Abstract of the Disclosure

The present invention relates to neutral, aqueous soluble  $\beta$ -glucans which exert potent and specific immunological effects without stimulating the production of certain cytokines, to preparations containing the novel  $\beta$ -glucans, and to a novel manufacturing process therefor. The neutral, aqueous soluble  $\beta$ -glucan preparation has a high affinity for the  $\beta$  glucan receptor of human monocytes and retains two primary biological (or immunological) activities, (1) the enhancement of microbicidal activity of phagocytic cells, and (2) monocyte, neutrophil and platelet hemo-poietic activity. Unlike soluble glucans described in the prior art, the neutral, aqueous soluble  $\beta$ -glucan of this invention neither induces nor primes IL-1 $\beta$  and TNF $\alpha$  production *in vitro* and *in vivo*. Safe and efficacious preparations of neutral, aqueous soluble  $\beta$ -glucan of the present invention can be used in therapeutic and/or prophylactic treatment regimens of humans and animals to enhance their immune response, without stimulating the production of certain biochemical mediators (e.g., IL-1 $\beta$ , TNF $\alpha$ ) that can cause detrimental side effects, such as fever and inflammation.